

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

## PCT

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT  
(PCT Rule 71.1)

To:

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Date of mailing  
(day/month/year)

17. 11. 98

Applicant's or agent's file reference

29665-0143 27881-1143

**IMPORTANT NOTIFICATION**

International application No.  
PCT/CA97/00459

International filing date (day/month/year)  
25/06/1997

Priority date (day/month/year)  
22/07/1996

Applicant

HYDRO-QUEBEC et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

#### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

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# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

|  |  |  |  |
|--|--|--|--|
| Applicant's or agent's file reference<br>29665-0143                                      | <b>FOR FURTHER ACTION</b>                                |  | See Notification of Transmittal of International Preliminary Examination Report (PCT/IPEA/416) |
| International application No.<br>PCT/CA97/00459  | International filing date (day/month/year)<br>25/06/1997 | Priority date (day/month/year)<br>22/07/1996 |  |
| International Patent Classification (IPC) or national classification and IPC<br>H02M7/00 |  |  |  |
| Applicant<br>HYDRO-QUEBEC et al.   |  |  |  |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

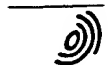

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

- ☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 6 sheets:

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☐ Certain observations on the international application

|   |   |
|---|---|
| Date of submission of the demand<br>24/10/1997  | Date of completion of this report<br>17. 11. 98   |
| Name and mailing address of the IPEA/<br><br> European Patent Office<br>D-80298 Munich<br>Tel. (+49-89) 2399-0. Tx: 523656 epmu d<br>Fax: (+49-89) 2399-4465 | Authorized officer<br><br>Kem, H<br><br><br>Telephone No. (+49-89) 2399-2266 |

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/CA97/00459

**I. Basis of the report**

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

**Description, pages:**

|            |                     |            |                |            |
|------------|---------------------|------------|----------------|------------|
| 1-15,17-41 | as originally filed |            |                |            |
| 16         | as received on      | 04/06/1998 | with letter of | 02/06/1998 |

**Claims, No.:**

|      |                |            |                |            |
|------|----------------|------------|----------------|------------|
| 1-15 | as received on | 04/06/1998 | with letter of | 02/06/1998 |
|------|----------------|------------|----------------|------------|

**Drawings, sheets:**

|            |                     |
|------------|---------------------|
| 1/27-27/27 | as originally filed |
|------------|---------------------|

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/CA97/00459

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

|                               |      |        |      |
|-------------------------------|------|--------|------|
| Novelty (N)                   | Yes: | Claims | 1-15 |
|                               | No:  | Claims |      |
| Inventive step (IS)           | Yes: | Claims | 1-15 |
|                               | No:  | Claims |      |
| Industrial applicability (IA) | Yes: | Claims | 1-15 |
|                               | No:  | Claims |      |

**2. Citations and explanations**

**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

**see separate sheet**

***to section V***

1. The application refers to a converter unit and a power module respectively for converting DC voltage into AC voltage using fast semiconductor switching devices. A main aspect in the design of such switching modules is to reduce the inherent wiring stray inductance to reduce the voltage spikes and to obtain a good EMI result.

Claim 1 refers with its features of the preamble to a prior art document US-A-4,670,833 revealing a semiconductor switching module using spatially closely adjacent conductors for reducing the stray capacitances. With the present configuration of the electrodes plates forming a cross section belt-like closed conductive path (current path) according to the characterizing portion a more effective reduction of the stray inductances can be achieved. Thereby claim 1 meets the requirements of Article 33 (2)(3) PCT. The industrial application of the claimed power converter is evident (Article 33 (4) PCT).

2. The dependent claims concern further advantageous embodiments of the invention.

***to section VII***

The description pages 6 to 8 should have been revised as the multiplicity of citations of prior art documents without elucidating the particular relevance in respect of the claimed matter is not in compliance with Rule 5 PCT.